BRAIN RESEARCH

VOL. 643 NOS. 1/2 **CONTENTS** **18 APRIL 1994**

Cited in Biological Abstracts (BIOSIS) – Chem. Abstracts – Index Medicus (MEDLINE) – Current Contents (Life Sci.) – Excerpta Medica (EMBASE) – Psychological Abstracts (PsycINFO) – Pascal et Francis (INIST-CNRS) – RIS (Reference Update) – Current Awareness in Biological Science (CABS)

Research Reports

Clozapine attenuates the discriminative stimulus properties of (−)-nicotine
J.D. Brioni, D.J.B. Kim, A.B. O'Neill, J.E.G. Williams and M.W. Decker (USA) 1

Serotonin controls the magnitude of LTP induced by theta bursts via an action on NMDA-receptor-mediated responses
U. Staubli and N. Otaky (USA, Canada) 10

Serotonergic suppression of interhemispheric cortical synaptic potentials
H.L. Read, S.G. Beck and N.J. Dun (USA) 17

Substance P and other putative transmitters modulate the activity of reticular pontine neurons: an electrophysiological and immunohistochemical study
M. Kungel, U. Ebert, H. Herbert and J. Ostwald (FRG) 29

Cytokine-specific central monoamine alterations induced by interleukin-1, -2 and -6
S. Zalcman, J.M. Green-Johnson, L. Murray, D.M. Nance, D. Dyck, H. Anisman and A.H. Greenberg (Canada) 40

Developmental changes in Gs and G_{olf} proteins and adenylyl cyclases in mouse brain membranes
R.A. Rius, S. Mollner, T. Pfeuffer and Y.P. Loh (USA, FRG) 50

Quinolinic acid lesions of the ventral striatum reduce sensorimotor gating of acoustic startle in rats
M.H. Kodsi and N.R. Swerdlow (USA) 59

Effects of lindane (γ-BHC) and related convulsants on $GABA_A$ receptor-operated chloride channels in frog dorsal root ganglion neurons
N. Tokutomi, Y. Ozoe, N. Katayama and N. Akaike (Japan) 66

Marked increase in [^{3}H](*R*)α-methylhistamine binding in the superior colliculus of visually deprived rats after unilateral enucleation
Y. Nakagawa, K. Yanai, J.H. Ryu, M. Kiyosawa, M. Tamai and T. Watanabe (Japan) 74

Effect of neurotransmitters on axoplasmic transport: how adrenaline affects superior cervical ganglion cells
T. Takenaka, T. Kawakami, H. Hori and Y. Bandou (Japan) 81

Volume transmission of dopamine over large distances may contribute to recovery from experimental parkinsonism
J.S. Schneider, D.S. Rothblat and L. DiStefano (USA) 86

Effect of acetyl-L-carnitine on recovery of brain phosphorus metabolites and lactic acid level during reperfusion after cerebral ischemia in the rat — study by ^{13}P- and ^{1}H-NMR spectroscopy
T. Aureli, A. Miccheli, M.E. Di Cocco, O. Ghirardi, A. Giuliani, M.T. Ramacci and F. Conti (Italy) 92

Transport of α-aminoisobutyric acid across the blood-brain barrier studied with in situ perfusion of rat brain
S.R. Ennis, X.-d. Ren and A.L. Betz (USA) 100

Cytotoxicity of the cocaine metabolite benzoylecgonine
Y. Lin and K.C. Leskawa (USA) 108

Cerebral metabolic changes induced by MK-801: a 1D (phosphorus and proton) and 2D (proton) in vivo NMR spectroscopy study
I. Loubinoux, P. Meric, J. Borredon, J.-L. Correze, B. Gillet, J.-C. Beloeil, B. Tiffon, J. Mispelter, J.-M. Lhoste and S. Jacques (France) 115

Involvement of M1 muscarinic receptors in the initiation of cholinergically induced epileptic seizures in the rat brain
J.W. Cruickshank, S.M. Brudzynski and R.S. McLachlan (Canada) 125

Fucose and fucose-containing sugar epitopes enhance hippocampal long-term potentiation in the freely moving rat
M. Krug, M. Wagner, S. Staak and K.-H. Smalla (Germany) 130

Non-reciprocal cross-adaptation of spiking responses of individual olfactory receptor neurons of spiny lobsters: evidence for two excitatory transduction pathways
P.C. Daniel, J.B. Fine, C.D. Derby and M.-N. Girardot (USA) 136

Extracellular serotonin promotes melatonin release from cultured rat pinealocytes: evidence for an S_2-type receptor-mediated autocrine feedback
J. Olcese and M. Münker (Germany) 150

Effect of local infusion of glutamate analogues into the nucleus accumbens of rats: an electrochemical and behavioural study
L. Svensson, J. Zhang, K. Johannessen and J.A. Engel (Sweden) 155

Localization of neurotrophin-3-like immunoreactivity in the rat central nervous system
X.-F. Zhou and R.A. Rush (Australia) 162

Interleukin-6 protects cultured rat hippocampal neurons against glutamate-induced cell death
M. Yamada and H. Hatanaka (Japan) 173

The effect of medial frontal cortex lesions on cardiovascular conditioned emotional responses in the rat
R.J. Frysztak and E.J. Neafsey (USA) 181

(contents continued on p. 360)

0006-8993(19940418)643:1/2;1-P

BRAIN RESEARCH

VOL. 643 NOS. 1/2 **CONTENTS** **18 APRIL 1994**

Cited in Biological Abstracts (BIOSIS) – Chem. Abstracts – Index Medicus (MEDLINE) – Current Contents (Life Sci.) – Excerpta Medica (EMBASE) – Psychological Abstracts (PsycINFO) – Pascal et Francis (INIST-CNRS) – RIS (Reference Update) – Current Awareness in Biological Science (CABS)

Research Reports

Clozapine attenuates the discriminative stimulus properties of (−)-nicotine
J.D. Brioni, D.J.B. Kim, A.B. O'Neill, J.E.G. Williams and M.W. Decker (USA) 1

Serotonin controls the magnitude of LTP induced by theta bursts via an action on NMDA-receptor-mediated responses
U. Staubli and N. Otaky (USA, Canada) 10

Serotonergic suppression of interhemispheric cortical synaptic potentials
H.L. Read, S.G. Beck and N.J. Dun (USA) 17

Substance P and other putative transmitters modulate the activity of reticular pontine neurons: an electrophysiological and immunohistochemical study
M. Kungel, U. Ebert, H. Herbert and J. Ostwald (FRG) 29

Cytokine-specific central monoamine alterations induced by interleukin-1, -2 and -6
S. Zalcman, J.M. Green-Johnson, L. Murray, D.M. Nance, D. Dyck, H. Anisman and A.H. Greenberg (Canada) 40

Developmental changes in Gs and G_{olf} proteins and adenylyl cyclases in mouse brain membranes
R.A. Rius, S. Mollner, T. Pfeuffer and Y.P. Loh (USA, FRG) 50

Quinolinic acid lesions of the ventral striatum reduce sensorimotor gating of acoustic startle in rats
M.H. Kodsi and N.R. Swerdlow (USA) 59

Effects of lindane (γ-BHC) and related convulsants on $GABA_A$ receptor-operated chloride channels in frog dorsal root ganglion neurons
N. Tokutomi, Y. Ozoe, N. Katayama and N. Akaike (Japan) 66

Marked increase in [^{3}H](*R*)α-methylhistamine binding in the superior colliculus of visually deprived rats after unilateral enucleation
Y. Nakagawa, K. Yanai, J.H. Ryu, M. Kiyosawa, M. Tamai and T. Watanabe (Japan) 74

Effect of neurotransmitters on axoplasmic transport: how adrenaline affects superior cervical ganglion cells
T. Takenaka, T. Kawakami, H. Hori and Y. Bandou (Japan) 81

Volume transmission of dopamine over large distances may contribute to recovery from experimental parkinsonism
J.S. Schneider, D.S. Rothblat and L. DiStefano (USA) 86

Effect of acetyl-L-carnitine on recovery of brain phosphorus metabolites and lactic acid level during reperfusion after cerebral ischemia in the rat — study by ^{13}P- and ^{1}H-NMR spectroscopy
T. Aureli, A. Miccheli, M.E. Di Cocco, O. Ghirardi, A. Giuliani, M.T. Ramacci and F. Conti (Italy) 92

Transport of α-aminoisobutyric acid across the blood-brain barrier studied with in situ perfusion of rat brain
S.R. Ennis, X.-d. Ren and A.L. Betz (USA) 100

Cytotoxicity of the cocaine metabolite benzoylecgonine
Y. Lin and K.C. Leskawa (USA) 108

Cerebral metabolic changes induced by MK-801: a 1D (phosphorus and proton) and 2D (proton) in vivo NMR spectroscopy study
I. Loubinoux, P. Meric, J. Borredon, J.-L. Correze, B. Gillet, J.-C. Beloeil, B. Tiffon, J. Mispelter, J.-M. Lhoste and S. Jacques (France) 115

Involvement of M1 muscarinic receptors in the initiation of cholinergically induced epileptic seizures in the rat brain
J.W. Cruickshank, S.M. Brudzynski and R.S. McLachlan (Canada) 125

Fucose and fucose-containing sugar epitopes enhance hippocampal long-term potentiation in the freely moving rat
M. Krug, M. Wagner, S. Staak and K.-H. Smalla (Germany) 130

Non-reciprocal cross-adaptation of spiking responses of individual olfactory receptor neurons of spiny lobsters: evidence for two excitatory transduction pathways
P.C. Daniel, J.B. Fine, C.D. Derby and M.-N. Girardot (USA) 136

Extracellular serotonin promotes melatonin release from cultured rat pinealocytes: evidence for an S_2-type receptor-mediated autocrine feedback
J. Olcese and M. Münker (Germany) 150

Effect of local infusion of glutamate analogues into the nucleus accumbens of rats: an electrochemical and behavioural study
L. Svensson, J. Zhang, K. Johannessen and J.A. Engel (Sweden) 155

Localization of neurotrophin-3-like immunoreactivity in the rat central nervous system
X.-F. Zhou and R.A. Rush (Australia) 162

Interleukin-6 protects cultured rat hippocampal neurons against glutamate-induced cell death
M. Yamada and H. Hatanaka (Japan) 173

The effect of medial frontal cortex lesions on cardiovascular conditioned emotional responses in the rat
R.J. Frysztak and E.J. Neafsey (USA) 181

(contents continued on p. 360)

0006-8993(19940418)643:1/2;1-P

(contents continued)

Progesterone metabolites, effective at the $GABA_A$ receptor complex, attenuate pain sensitivity in rats
C.A. Frye and J.E. Duncan (USA) 194
Pharmacological identification of a novel Ca^{2+} channel in chicken brain synaptosomes
P.M. Lundy, M.G. Hamilton and R. Frew (Canada) 204
Perinatal low-level lead exposure and the septo-hippocampal cholinergic system: selective reduction of muscarinic receptors and cholineacetyltransferase in the rat septum
H. Bielarczyk, J.L. Tomsig and J.B. Suszkiw (USA) 211
Modulation of neuronal firing in the medullary solitary complex by electrical stimulation of the hypothalamic defense and vigilance areas in rabbits
Y.-F. Duan, R. Winters, P.M. McCabe, E.J. Green, Y. Huang and N. Schneiderman (USA) 218
AP-1 and CRE DNA binding activities in rat brain following pentylenetetrazole induced seizures
K. Łukasiuk and L. Kaczmarek (Poland) 227
Transient forebrain ischemia induces delayed injury in the substantia nigra reticulata: degeneration of GABA neurons, compensatory expression of GAD mRNA
M. Saji, M. Cohen, A.D. Blau, T.C. Wessel and B.T. Volpe (USA) 234
μ-Opioid receptor mRNA expression in the rat CNS: comparison to μ-receptor binding
A. Mansour, C.A. Fox, R.C. Thompson, H. Akil and S.J. Watson (USA) 245
Ischemia-induced changes in catecholamine release and their mechanisms: a study using cultured bovine adrenal chromaffin cells
A. Itoh, S. Miwa, K. Koshimura, Y. Akiyama, Y. Takagi, S. Yamagata, H. Kikuchi and T. Masaki (Japan) 266
Effects of repeated administration of a high dose of methamphetamine on dopamine and glutamate release in rat striatum and nucleus accumbens
T. Abekawa, T. Ohmori and T. Koyama (Japan) 276
Age-related changes in the spinal antinociceptive effects of DAGO, DPDPE and β-endorphin in the rat
T. Crisp, J.L. Stafinsky, D.L. Hoskins, V.C. Perni, M. Uram and T.L. Gordon (USA) 282
Arachidonic acid depresses non-NMDA receptor currents
Y. Kovalchuk, B. Miller, M. Sarantis and D. Attwell (UK) 287
A possible glial role in the mammalian circadian clock
R.A. Prosser, D.M. Edgar, H.C. Heller and J.D. Miller (USA) 296

Short Communications

Survival and regeneration of adult human photoreceptors in vitro
D. Hicks, V. Forster, H. Dreyfus and J. Sahel (France) 302
Bilateral 6-OHDA lesions of the locus coeruleus impair associative olfactory learning in newborn rats
R.M. Sullivan, D.A. Wilson, C. Lemon and G.A. Gerhardt (USA) 306
Potassium and calcium channel dependence of bursting in cultured neuronal networks
B.K. Rhoades and G.W. Gross (USA) 310
Accumulation of amyloid β-protein precursor (APP) in Purkinje cells . and increase of amino-terminal fragments of APP in cerebrum and cerebellum of aged rat brain
Y. Nakamura, M. Takeda, H. Niigawa, F. Kametani, S. Hariguchi, I. Yoshida, S. Kitajima and T. Nishimura (Japan) 319
Amyloid beta-peptide ($A\beta P$) potentiates a nimodipine-sensitive L-type barium conductance in N1E-115 neuroblastoma cells
R.M. Davidson, L. Shajenko and T.S. Donta (USA) 324
Selective cortical control of information flow through different . intraspinal collaterals of the same muscle afferent fiber
J.R. Eguibar, J. Quevedo, I. Jiménez and P. Rudomin (México) 328
Pre- and post-synaptic modulators of excitatory neurotransmission: comparative effects on hypoxia/hypoglycemia in cortical cultures
B. Koretz, K. Von B. Ahern, N. Wang, H.S. Lustig and D.A. Greenberg (USA) 334
Grafting fetal suprachiasmatic nuclei in the hypothalamus of old hamsters restores responsiveness of the circadian clock to a phase shifting stimulus
O. Van Reeth, Y. Zhang, P.C. Zee and F.W. Turek (USA, Belgium) 338
Modulation of dopamine D_3 receptor binding by *N*-ethylmaleimide and neurotensin
Y. Liu, M. Hillefors-Berglund and G. Von Euler (Sweden) 343
Effects of hypothalamic lesions on courtship and copulatory behavior in sexual and unisexual whiptail lizards
P.A. Kingston and D. Crews (USA) 349
The voltage-sensitive Ca^{2+} channel (VSCC) antagonists ω-Aga-IVA and ω-CTX-MVIIC inhibit spontaneous epileptiform discharges in the rat cortical wedge
L.J. Robichaud, S. Wurster and P.A. Boxer (USA) 352

Author Index 357